

**Dr. Duke's Phytochemical and Ethnobotanical Databases**

**Chemicals found in Nicotiana tabacum**

| Activities Count | Chemical         | Plant Part | Low PPM | High PPM | StdDev               | Refernce Citation  |
|------------------|------------------|------------|---------|----------|----------------------|--|
| 176              | QUERCETIN        | Flower     |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 102              | CAFFEIC-ACID     | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 93               | TOCOPHEROL       | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 87               | RUTIN            | Leaf       |         | 10000.0  | -0.38372262807139457 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 77               | CHLOROGENIC-ACID | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 76               | EUGENOL          | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 75               | KAEMPFEROL       | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 67               | 1,8-CINEOLE      | Leaf       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 61               | FERULIC-ACID     | Flower     |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 53               | BETA-CAROTENE    | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical        | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|-----------------|------------|---------|----------|----------------------|--|
| 47               | BETA-SITOSTEROL | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 44               | QUERCITRIN      | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 44               | SCOPOLETIN      | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 32               | AESCULETIN      | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 30               | ESCULETIN       | Leaf       |         |          |                      | --   |
| 27               | LINOLEIC-ACID   | Seed       | 50000.0 | 70000.0  | -0.31806666615059304 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 26               | PHENOL          | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 25               | P-COUMARIC-ACID | Flower     |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 24               | PECTIN          | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 24               | ETHANOL         | Leaf       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 23               | CITRIC-ACID     | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical      | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|---------------|------------|---------|----------|----------------------|--|
| 22               | GABA          | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 22               | ISOQUERCITRIN | Leaf       |         | 25.0     | -0.4419059183588981  | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 22               | CATECHOL      | Leaf       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 21               | NICOTINE      | Leaf       | 20000.0 | 40000.0  | 1.4133293939027907   | --   |
| 20               | BENZOIC-ACID  | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 18               | GUAIACOL      | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 18               | OLEIC-ACID    | Seed       | 62500.0 | 122500.0 | 0.027921714072142736 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 16               | ACETIC-ACID   | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 16               | ISOEUGENOL    | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 15               | MALIC-ACID    | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 15               | TRIGONELLINE  | Seed       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical       | Plant Part | Low PPM | High PPM | StdDev            | Reference Citation   |
|------------------|----------------|------------|---------|----------|-------------------|--|
| 15               | LUTEIN         | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 14               | SUCROSE        | Leaf       |         | 70000.0  | 1.929045642140917 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 14               | SHIKIMIC-ACID  | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 14               | BETAINE        | Leaf       |         |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 13               | LIGNIN         | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 13               | FORMIC-ACID    | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 13               | PALMITIC-ACID  | Seed       | 57500.0 | 140000.0 | 2.189053211185921 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 12               | STIGMASTEROL   | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 11               | NICOTINIC-ACID | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 11               | SORBITOL       | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical      | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---------------|------------|---------|----------|--------|--|
| 10               | PIPERIDINE    | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 9                | OXALIC-ACID   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 8                | LACTIC-ACID   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 8                | FRUCTOSE      | Root       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 8                | M-CRESOL      | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 8                | INOSITOL      | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 7                | CYCLOARTENOL  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7                | SUCCINIC-ACID | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 7                | ASTRAGALIN    | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7                | FUMARIC-ACID  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 6                | (-)-ANABASINE | Leaf       |         |          |        | --   |

| Activities Count | Chemical        | Plant Part | Low PPM | High PPM | StdDev              | Reference Citation   |
|------------------|-----------------|------------|---------|----------|---------------------|--|
| 6                | ANABASINE       | Leaf       |         |          |                     | --   |
| 6                | RISHITIN        | Leaf       |         |          |                     | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 6                | PROPIONIC-ACID  | Leaf       |         |          |                     | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 6                | BUTYRIC-ACID    | Leaf       |         |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 6                | ACETOPHENONE    | Leaf       |         |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 6                | ACETALDEHYDE    | Leaf       |         |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 5                | CAPRYLIC-ACID   | Flower     |         |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 5                | STARCH          | Leaf       | 10000.0 | 20000.0  | -0.4200011928212534 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 5                | SALICYLALDEHYDE | Leaf       |         |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 5                | ORNITHINE       | Root       |         |          |                     | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |

| Activities Count | Chemical         | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|------------------|------------|---------|----------|--------|--|
| 5                | ERGOSTEROL       | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 4                | 4-VINYL-GUAIACOL | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 4                | TRYPTAMINE       | Plant      |         |          |        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 3                | SOLAVETIVONE     | Leaf       |         |          |        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 3                | MANNOSE          | Root       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 3                | CICHORIIN        | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 3                | SCOPOLIN         | Leaf       |         |          |        | --   |
| 3                | CAPSIDIOL        | Leaf       |         |          |        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 3                | PYRIDINE         | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 3                | XYLOSE           | Root       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |

| Activities Count | Chemical             | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|----------------------|------------|---------|----------|--------|--|
| 2                | NONACOSANE           | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2                | PHENYLACETIC-ACID    | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | 2-NONANONE           | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | MYOSMINE             | Leaf       |         |          |        | --   |
| 2                | VIOLAXANTHIN         | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2                | MALTOSE              | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2                | PHENYL-ACETALDEHYDE  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | DIMETHYL-AMINE       | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | NEOXANTHIN           | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2                | METHYL-PHENYLACETATE | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | DIETHYL-AMINE        | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical                 | Plant Part | Low PPM | High PPM | StdDev             | Reference Citation   |
|------------------|--------------------------|------------|---------|----------|--------------------|--|
| 2                | TRITRIACONTANE           | Leaf       |         |          |                    | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | ASPARAGINE               | Leaf       |         |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2                | QUERCETIN-3'-METHYLETHER | Flower     |         |          |                    | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | 4-METHYL-CATECHOL        | Leaf       |         |          |                    | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2                | GLUTINOSONE              | Plant      |         |          |                    | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 2                | ISOBUTYRIC-ACID          | Leaf       |         |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2                | PHYSTOSTEROLS            | Leaf       | 1000.0  | 5000.0   | 0.8822465864092441 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | RAFFINOSE                | Leaf       |         |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | AMYLASE                  | Leaf       |         |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | NICOTIANAMINE            | Leaf       |         |          |                    | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1                | QUINIC-ACID              | Leaf       |         |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical                     | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|------------------------------|------------|---------|----------|--------|--|
| 1                | GALACTOSE                    | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | MALONIC-ACID                 | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | TRIMETHYLAMINE               | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1                | QUERCETIN-3,3'-DIMETHYLETHER | Flower     |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1                | METHYL-AMINE                 | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | STACHYOSE                    | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | CELLULOSE                    | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | MELILOTIC-ACID               | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | PYRROLIDINE                  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 1                | CATALASE                     | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical                    | Plant Part | Low PPM  | High PPM | StdDev            | Reference Citation   |
|------------------|-----------------------------|------------|----------|----------|-------------------|--|
| 1                | SPERMIDINE                  | Plant      |          |          |                   | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 1                | ISOBUTYRALDEHYDE            | Leaf       |          |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | LIPASE                      | Leaf       |          |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | CARBOHYDRATES               | Leaf       | 250000.0 | 500000.0 | -0.88949734732397 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | SOLANESYL-PALMITATE         | Leaf       |          |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | PHOSPHATASE                 | Leaf       |          |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | 4-ETHYL-2,3-DIMETHOXYPHENOL | Leaf       |          |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | N-METHYLISOPROPYLAMINE      | Leaf       |          |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | O-ETHYLANILINE              | Leaf       |          |          |                   | --   |
| 0                | XYLENOL                     | Leaf       |          |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |

| Activities Count | Chemical  | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---|------------|---------|----------|--------|--|
| 0                | RHAMNOSE  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | NORNICOTINE   | Leaf       |         |          |        | --   |
| 0                | ISOBUTYL-AMINE  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 3,3,5-TRIMETHYL-8-ISOPROPYL-4,9-DIOXABICYCLO-(3,3,1)-NONAN-2-OL | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | N-AMYLAMINE   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | EMULSIN   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | (+)-SOLANONE  | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | ISOVALERIANIC-ACID  | Flower     |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 5-METHYL-2,3'-BIPYRIDINE  | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | NICOTIANANINE   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | GAMMA-SITOSTEROL  | Leaf       | 100.0   | 200.0    |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 2,3-DIMETHYLANILINE   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical                          | Plant Part | Low PPM  | High PPM | StdDev              | Reference Citation   |
|------------------|-----------------------------------|------------|----------|----------|---------------------|--|
| 0                | MEGASTIGMA-4,6,8-TRIENE-3-ONE     | Plant      |          |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | TANNINS                           | Leaf       | 30000.0  | 60000.0  | -0.4431630959000918 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | PROTEASE                          | Leaf       |          |          |                     | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | SOLANESOL                         | Leaf       | 3000.0   | 4000.0   |                     | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | PHENYLCROTONIC-ACID               | Leaf       |          |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | RUBISCO                           | Leaf       |          |          |                     | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 0                | 4-ACETYL-5-METHYLFURAN            | Leaf       |          |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | N-METHYLISOBUTYLAMINE             | Leaf       |          |          |                     | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | FAT                               | Seed       | 250000.0 | 350000.0 | 0.44568382272451457 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | (E)-5-ISOPROPYLNON-3-ENE-2,8-DIOL | Plant      |          |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | WATER                             | Leaf       | 800000.0 | 900000.0 | 0.46079394661662293 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |

| Activities Count | Chemical                   | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|----------------------------|------------|---------|----------|--------|--|
| 0                | ISOAMYL-AMINE              | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 2-PHENYLETHYL-AMINE        | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | N,N-PROPYLISOPROPYLAMINE   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | DRIMAN-8-OL                | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 5-ISOPROPYLNONANE-2,8-DIOL | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | GALACTURONIC-ACID          | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 2,3-DIMETHOXYPHENOL        | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | CYANIDIN-3-RHAMNOGLUCOSIDE | Flower     |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | T-BUTYLAMINE               | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | PROPYL-PHENOL              | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | CAFFEOYLSPERMIDINE         | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |

| Activities Count | Chemical  | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|---|------------|---------|----------|----------------------|--|
| 0                | SOLANASCONE   | Plant      |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | 4-(2',2',6'TRIMETHYL-6'-VINYLCYCLOHEXYL)-2-BUTANONE                         | Leaf       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | N-METHYLISOAMYLAMINE  | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | EXO-1-(1-METHYL-4-ISOPROPYL-7,8-DIOXABICYCLO-{3.2.1}-OCY-6-YL)-METHYLKETONE | Plant      |         |          |                      | --   |
| 0                | (E)-5-ISOPROPYL-8-HYDROXYNON-6-EN-2-ONE                                     | Plant      |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | AMMONIA   | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | NITROGEN  | Leaf       | 20000.0 | 40000.0  | -0.18861202628009283 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | INVERTASE   | Leaf       |         |          |                      | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | DRIMAN-8,11-DIOL  | Leaf       |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 5-ISOPROPYL-8-HYDROXYNONAN-2-ONE  | Plant      |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | NICOTELLINE   | Plant      |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | 18-METHYL-3-ISOPROPYL-CYCLOPENTANE-1,2-DICARBOXYLIC-ACID                    | Plant      |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |

| Activities Count | Chemical   | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|--|------------|---------|----------|--------|--|
| 0                | SOCRATINES   | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | O-ETHYLANILINE   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 3-PYRIDYL METHYL KETONE  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | N-METHYLETHYLAMINE   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | EXO-1-(1-METHYL-4-ISOPROPYL-7,8-DIOXABICYCLO-{3,2,1}-OCT-6-YL)-ETHANOL | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | (E)-5-ISOPROPYL-8-HYDROXY-8-METHYLNON-6-EN-2-ONE                       | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | LEVANTENOLIDES   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | CAFFEYLPUTRESCINE  | Flower     |         |          |        | --   |
| 0                | ALPHA-KETO-GLUTARIC-ACID   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | NICOTYRINE   | Leaf       |         |          |        | --   |
| 0                | HEPTACOSANE  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 2-METHYL-5-ISOPROPYL-1-CYCLOPENTENE-1-CARBOXYLIC-ACID                  | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | METHYLGUAIACOL   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical   | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|--|------------|---------|----------|--------|--|
| 0                | TRITIACONTANE  | Leaf       |         |          |        | --   |
| 0                | 5-ISOPROPYL-3-HEPTEN-2-ONE                                   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 15-NOR-8ALPHA-HYDROXY-12E-LABDEN-14-OL                       | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | CIS-2-ISOPROPENYL-8-METHYL-1,2,3,4-TETRAHYDRO-1-NAPHTHALENOL | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | PROP-2-ENYLMALONIC-ACID                                      | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | (-)-BETA-CARYOPHYLLENE-EPOXIDE                               | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | N-CAFFEOYLPUTRESCINE   | Flower     |         |          |        | --   |
| 0                | P-ALLYL-CATECHOL   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 3-PYRIDYLETHYLKETONE   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | N-METHYL-PYRROLINE   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | (E)-5-ISOPROPYL-6,7-EPOXY-8-HYDROXY-8-METHYLNONAN-2-ONE      | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | LEVANTANOLIDES   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical  | Plant Part | Low PPM | High PPM | StdDev            | Reference Citation   |
|------------------|---|------------|---------|----------|-------------------|--|
| 0                | QUERCETIN-3-DIGLUCOSIDE   | Flower     |         |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | ALKALOIDS   | Leaf       | 40000.0 | 60000.0  | 3.422113890831041 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | NICOTOINE   | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | HENTRIACONTANE  | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 2-METHOXYCATACHOL   | Leaf       |         |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | DIMETHOXYPHENOL   | Leaf       |         |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | NEOPHYTADIENE   | Leaf       |         |          |                   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | FURFROL   | Leaf       |         |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 12-HYDROXY-13-EPIMANOYLOSIDE  | Leaf       |         |          |                   | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | PRENYLNORSOLANODION E   | Plant      |         |          |                   | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | ENDO-2-(1-METHYL-4-ISOPROPYL-7,8-DIOXABICYCLO-[3.2.1]-OCT-6-YL)-PROPEN-2-OL | Plant      |         |          |                   | --   |

| Activities Count | Chemical                                    | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---|------------|---------|----------|--------|--|
| 0                | PEROXIDASE                                  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | ISOVALEIC-ACID                              | Plant      |         |          |        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 0                | OXYNICOTINE                                 | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | ISOPROPIONIC-ACID                           | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | 3-OXO-ALPHA-IONOL                           | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | N-METHYL-N-BUTYLAMINE                       | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | ETHYL-PHENOL                                | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | (E)-3-ISOPROPYL-8-METHYLHEPTA-4,6-DIEN-1-OL | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | LATHREINE                                   | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | NICOTININE                                  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | 2-FUROIC-ACID?                              | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |

| Activities Count | Chemical                                     | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|--|------------|---------|----------|--------|--|
| 0                | METHYL-ETHYL-ACETIC-ACID                     | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | NEOHEPTADIENE                                | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | FURAN-BETA-CARBONIC-ACID                     | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 11-NOR-8-HYDROXY-9-DRIMENONE                 | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | MALEIC-ACID                                  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | PLANTEOSE                                    | Seed       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 4-PROPYLGUAIACOL                             | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | PENTOSE                                      | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | ISONORDRIMENONE                              | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 3-ISOPROPENYL-5-METHYL-1,2-DIHYDRONAPTHALENE | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | N-METHYL-L-ANATABINE                         | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical                               | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|--|------------|---------|----------|--------|--|
| 0                | ETHYL-AMINE                            | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | (3S,6R,73,9S)-MEGASTIGMADIENE-3,9-DIOL | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | GLYXYLIC-ACID                          | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 2-DECANONE                             | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | DICAFFEOYLSPERMIDINE                   | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | TRANS-CROTONIC-ACID                    | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | NEO-BETA-CAROTENE                      | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 1-OXO-ALPHA-CYPERONE                   | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | M-HYDROXYACETOPHENONE                  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | CETYL-ALCOHOL                          | Flower     |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | PL                                     | Plant      |         |          |        | --   |
| 0                | 4-METHYL-PENTAN-2-ONE                  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | (+)-NORNICOTINE                        | Leaf       |         |          |        | --   |

| Activities Count | Chemical  | Plant Part | Low PPM  | High PPM | StdDev             | Reference Citation   |
|------------------|---|------------|----------|----------|--------------------|--|
| 0                | ANATABINE   | Root       |          |          |                    | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 0                | ASH   | Leaf       | 120000.0 | 250000.0 | 2.3106721759278104 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | ISONICOTEINE  | Leaf       |          |          |                    | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | 3,7,13-TRIMETHYL-10-ISOPROPYL-2,6,11,13-TETRADECATETRAEN-1-AL | Plant      |          |          |                    | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | N-METHYL-L-ANABASINE  | Leaf       |          |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | (3S,6R,7S,9R)-MEGASTIGMADIENE-3,9-DIOL                        | Plant      |          |          |                    | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | L-ANATABINE   | Leaf       |          |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | BETA-SITOSTEROL-GLUCOSIDE                                     | Leaf       |          |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | GLYCOLASE   | Leaf       |          |          |                    | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | 2,6-DIMETHYLANILINE   | Leaf       |          |          |                    | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | METHOXYPHENOL   | Leaf       |          |          |                    | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |

| Activities Count | Chemical                        | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---------------------------------|------------|---------|----------|--------|--|
| 0                | DI-N-PROPYL-AMINE               | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | SPIROXABOVALIDE                 | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | NECOTELLINE                     | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | RUTIN-7-GLUCOSIDE               | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | PECTIC-ACID                     | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | ARABINOSE                       | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 3,5-DIMETHOXYPHENOL             | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | N-HEXYLAMINE                    | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | (13E)-ACETOXY-13-LABDEN-8-OL    | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | KETONE-ALDEHYDE-MUTASE          | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 6-MEGASTIGMA-4,7,9-TRIENE-3-ONE | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |

| Activities Count | Chemical                     | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|------------------------------|------------|---------|----------|--------|--|
| 0                | NICOTIMINE                   | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 2,5-DIMETHYLANILINE          | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | DI-N-BUTYLAMINE              | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | TOBACCIC-ACIDS               | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | 1,2,5,6-TETRAHYDROPURIDINE   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | M-ANISIDINE                  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | PHYTUBEROL                   | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | 4-METHYL-2,6-DIMETHOXYPHENOL | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | N-PROPYL-AMINE               | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | BETA-CARYOPHYLLENE-EPOXIDE   | Leaf       |         |          |        | --   |
| 0                | PECTASE                      | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical                              | Plant Part     | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---------------------------------------|----------------|---------|----------|--------|--|
| 0                | ACETOSYRINGONE                        | Tissue Culture |         |          |        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 0                | ANILINE                               | Leaf           |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | O-TOLUIDINE                           | Leaf           |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | 3,4-DIMETHYLANILINE                   | Leaf           |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | N-HEPTYLAMINE                         | Leaf           |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | (11E,13S)-LABDA-11,14-DIENE-8,13-DIOL | Plant          |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | KAEMPFEROL-GLUCOSIDE                  | Leaf           |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | BETA-METHYL-VALERIC-ACID              | Leaf           |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |
| 0                | 5-METHYL-FURFROL                      | Leaf           |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | NICOTIFLORIN-7-GLUCOSIDE              | Leaf           |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |

| Activities Count | Chemical                              | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---------------------------------------|------------|---------|----------|--------|--|
| 0                | GIBBERELLINS                          | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 2,4,6-TRIMETHYLANILINE                | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | MEGASTIGMA-5,8-DIENE-4-ONE            | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | DEXTRIN                               | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | TETRAHYDRO-BETA-IONONE                | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 1,2(BETA-PYRIDYL)PIPERIDINE-ANABASINE | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | SOLANOFURAN                           | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | 4-HYDROXYCOUMARIC-ACID                | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | N-OCTYLAMINE                          | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | FLAVOXANTHIN                          | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | RIBOSE                                | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

| Activities Count | Chemical  | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---|------------|---------|----------|--------|--|
| 0                | 6-HYDROXYKYNURENIC-ACID   | Plant      |         |          |        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 0                | ANATALLINE  | Root       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | NORSOLENESENE   | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | 3,4,5-TRIMETHYLPHENOL   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | N-BUTYL-AMINE   | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | ENDO-2-(1-METHYL-4-ISOPROPYL-7,8-DIOXABICYCLO-{3.2.1}-OCT-6-YL)-PROPEN-2-OL | Plant      |         |          |        | --   |
| 0                | (11E,13R)-LABDA-11,14-DIENE-8,13-DIOL                                       | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | BETA-INDOLEACETIC-ACID  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | 5-METHYL-3-HEXEN-2-ONE  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | NICOTIFLORIN  | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                             |
| 0                | GAMMA-SITOSTEROL-GLUCOSIDE  | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                             |

| Activities Count | Chemical                          | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|-----------------------------------|------------|---------|----------|--------|--|
| 0                | 2,3-DIPYRIDYL                     | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | MEGASTIGMA-5(13),7-DIENE-6,9-DIOL | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | D-GLYCERIC-ACID                   | Leaf       | 5000.0  | 15000.0  |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | TEREPHTHALIC-ACID                 | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0                | PURINES                           | Leaf       |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |